



Department of Energy
Golden Field Office
15013 Denver West Parkway
Golden, Colorado 80401

May 21, 2018



Colleen R.L. Rathbone
U.S. Environmental Protection Agency, Region 8
Wastewater Unit Manager
1595 Wynkoop Street
Denver, CO 80202-1129

SUBJECT: MUNICIPAL SEPARATE STORM SEWER SYSTEM APPLICATION SUBMITTAL

Dear Ms. Rathbone:

Please find enclosed the U.S. Department of Energy's (DOE) application for coverage under the U.S.EPA's National Pollutant Discharge Elimination System Stormwater Phase II Rule, as requested in your letter dated December 21, 2017.

The application is for stormwater discharges from the National Renewable Energy Laboratory's South Table Mountain site's municipal separate storm sewer system (MS4) located in Golden, Colorado. The current maximum daily user population for the South Table Mountain site is 1,627 full-time employees and the site is 0.51 square mile (327 acres) in area. There is a 0.02 square mile (15 acres) area in the northeast corner of the site that does not drain to the site MS4. Therefore, the total area that would be served by the MS4 permit is 0.49 square miles (312 acres).

The following attachments are included as part of the application:

- Completed EPA Form 1
- Best management practices, measurable goals, responsible organization and proposed schedule of completion of activities to address the Phase II rule six minimum control measures
- Storm sewer map of the National Renewable Energy Laboratory

The DOE point-of-contact for implementing the stormwater management program is the Environment, Safety and Health Office Director. Contact information is provided in the completed EPA Form 1.

DOE would like to thank you for the assistance you have provided throughout this application process. If you have any questions or require additional information, please contact Nicole Serio of my staff at (720) 356-1333 or Nicole.Serio@ee.doe.gov.

Sincerely,

Derek G. Passarelli
Director
Golden Field Office

Attachments: As stated
Electronic cc: Lori Gray, GFO
Nicole Serio, GFO

Julie Baker, NREL
Henry Higaki, NREL
John Eickhoff, NREL
Genny Braus, NREL

FORM 1 GENERAL		U.S. ENVIRONMENTAL PROTECTION AGENCY GENERAL INFORMATION Consolidated Permits Program (Read the "General Instructions" before starting.)		I. EPA I.D. NUMBER		T/A		C			
LABEL ITEMS		PLEASE PLACE LABEL IN THIS SPACE		GENERAL INSTRUCTIONS							
I. EPA I.D. NUMBER				If a preprinted label has been provided, affix it in the designated space. Review the information carefully. If any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI (except VI-B which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.							
III. FACILITY NAME											
V. FACILITY MAILING ADDRESS											
VI. FACILITY LOCATION											
II. POLLUTANT CHARACTERISTICS											
INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms .											
SPECIFIC QUESTIONS			Mark "X"			SPECIFIC QUESTIONS			Mark "X"		
			YES	NO	FORM ATTACHED				YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S. ? (FORM 2A)				X		B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S. ? (FORM 2B)				X	
			16	17	18				19	20	21
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)			X			D. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S. ? (FORM 2D)				X	
			22	23	24				25	26	27
E. Does or will this facility treat, store, or dispose of hazardous wastes ? (FORM 3)				X		F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)				X	
			28	29	30				31	32	33
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)				X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)				X	
			34	35	36				37	38	39
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)				X		J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)				X	
			40	41	42				43	44	45
III. NAME OF FACILITY											
C SKIP NATIONAL RENEWABLE ENERGY LABORATORY											
15 16 - 29 30 69											
IV. FACILITY CONTACT											
A. NAME & TITLE (last, first, & title)										B. PHONE (area code & no.)	
C GRAY LORI ACTING ESHO DIRECTOR DEPT OF ENERGY										(240) 562-1568	
15 16 45 46 48 49 51 52- 55											
V. FACILITY MAILING ADDRESS											
A. STREET OR P.O. BOX											
C 15013 DENVER WEST PARKWAY											
15 16 45											
B. CITY OR TOWN										C. STATE	
C GOLDEN										CO	
15 16 40 41 42										D. ZIP CODE	
										80401	
										47 51	
VI. FACILITY LOCATION											
A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER											
C 15013 DENVER WEST PARKWAY											
15 16 45											
B. COUNTY NAME											
JEFFERSON											
46 70											
C. CITY OR TOWN										D. STATE	
C GOLDEN										CO	
15 16 40 41 42										E. ZIP CODE	
										80401	
										47 51 52- 54	

VII. SIC CODES (4-digit, in order of priority)

15	16	17	18	19
VIII. OPERATOR INFORMATION				

E. STREET OR P.O. BOX	
15013 DENVER WEST PARKWAY	
26	55

[illegible][illegible]

XII. NATURE OF BUSINESS (provide a brief description)

XIII. CERTIFICATION (see instructions)

COMMENTS FOR OFFICIAL USE ONLY														
C														
C														
15	16													55

Type	Location/ Description	Category	Issuing Agency	ID #
Air	STM FTLB waste gas combustor	Permit	APCD	99JE0400
Air	STM RFHP wood waste boiler	Permit	APCD	07JE0277
Air	STM fugitive dust from construction activities	Permit	APCD	08JE0889L
Air	STM RSF 1 diesel-fired standby electrical generator	Permit	APCD	10JE1400
Air	STM RSF 2 diesel-fired standby electrical generator	Permit	APCD	11JE1303
Air	STM FTLB diesel-fired standby electrical generator	Permit	APCD	10JE1630
Air	NWTC Site 4.0 diesel-fired standby electrical generator	Permit	APCD	10JE1712
Air	STM parking garage diesel-fired standby electrical generator	Permit	APCD	11JE1997
Air	STM ESIF diesel-fired standby electrical generator	Permit	APCD	11JE3542
Air	STM ESIF research electrical generator #3	Permit	APCD	13JE2829
Air	STM IBRF scrubber and baghouse	Permit	APCD	11JE1798
Groundwater well	STM FTLB groundwater monitoring well MW-FTLB-1	Permit	DWR	301322
Groundwater well	STM FTLB groundwater monitoring well MW-FTLB-2	Permit	DWR	301323
Groundwater well	STM FTLB groundwater monitoring well MW-FTLB-3	Permit	DWR	301324
Hazardous materials	STM WHF hazardous material storage and use permit	Permit	WMFR	11408
Hazardous materials	STM SERF hazardous material storage and use permit	Permit	WMFR	11412

Hazardous materials	STM S&TF hazardous material storage and use permit	Permit	WMFR	11413
Hazardous materials	STM FTLB hazardous material storage and use permit	Permit	WMFR	11409
Hazardous materials	STM IBRF hazardous material storage and use permit	Permit	WMFR	11410
Hazardous materials	STM Shipping and Receiving hazardous material storage and use permit	Permit	WMFR	11411
Stormwater	STM SERF & S&TF Landscape Improvements/Site Improvements	Permit	EPA	COR10F00K
Stormwater	NWTC Site Improvements, Power Generation Upgrade, and Secondary Feeder	Permit	EPA	COR10F028

Acronyms used in the table

APCD – Air Pollution Control Division of Colorado Department of Public Health and the Environment (CDPHE)

DWR – Division of Water Resources

EPA – Environmental Protection Agency

ESIF – Energy Systems Integration Facility

FTLB – Field Test Laboratory Building

IBRF – Integrated Biorefinery Research Facility

NWTC – National Wind Technology Center

RFHP – Renewable Fuel Heat Plant

RSF – Research Support Facility

S&TF – Science and Technology Facility

SERF – Solar Energy Research Facility

STM – South Table Mountain

WHF – Waste Handling Facility

WMFR – West Metro Fire Rescue

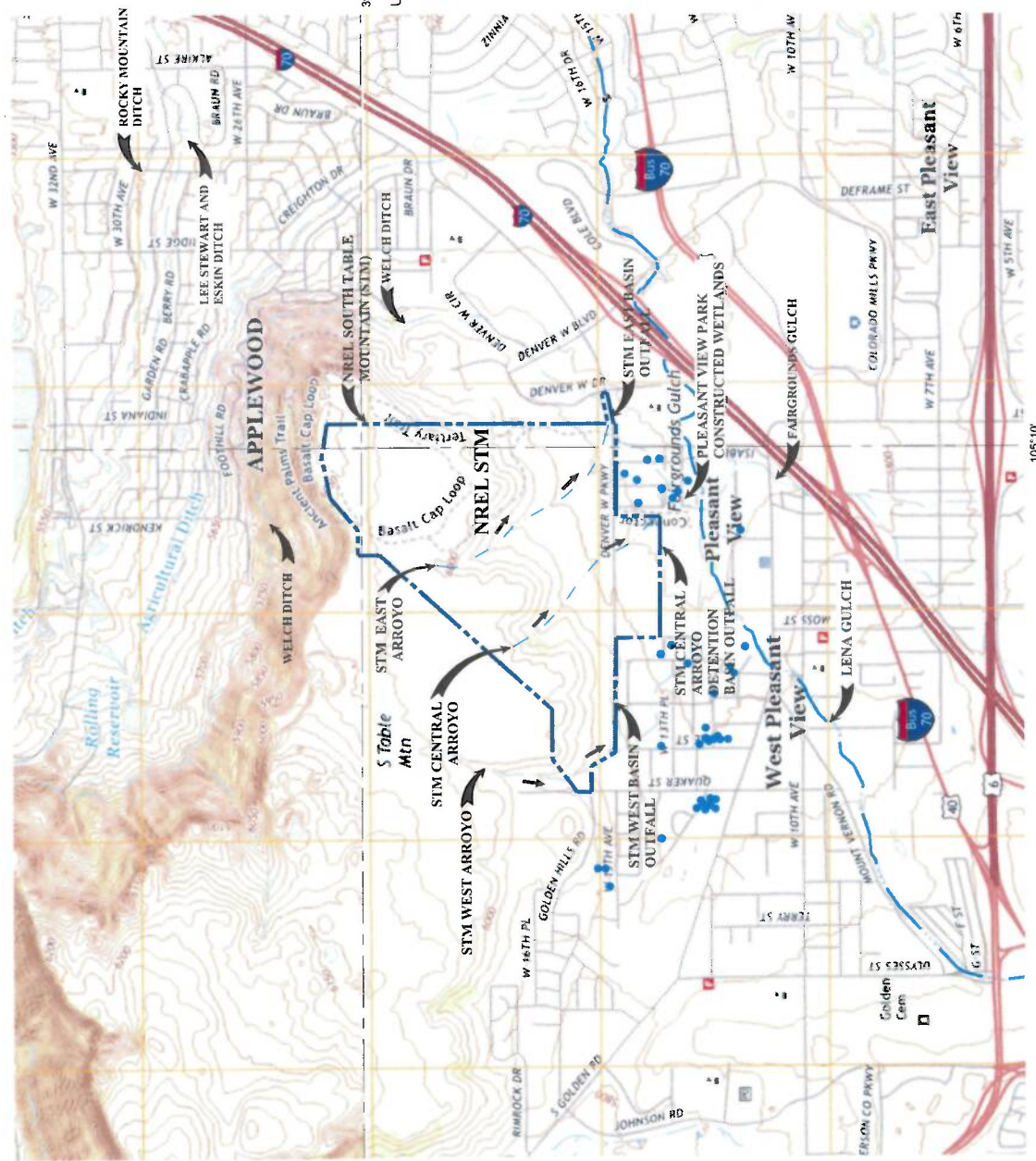
LEGEND

SITE BOUNDARY
DOMESTIC WATER WELL

NOTES.

1. THE NATIONAL RENEWABLE ENERGY LABORATORY'S (NREL'S) SOUTHWESTERN MOUNTAIN (STM) SITE HAS NO EXISTING OR PROPOSED INTAKE OR DISCHARGE STRUCTURES.
2. NREL'S STM SITE HAS NO INJECTION WELL OR EPA PERMITTED HAZARDOUS WASTE DISPOSAL SITES.

USGS MAP GOLDEN, CO
39°45'
USGS MAP MORRISON, CO

[illegible]

NREL Municipal Separate Storm Sewer Permit Application Minimum Control Measures Programs



Public Education and Outreach on Stormwater Impacts

	Best Management Practices	Measurable Goals	Responsible Role	Schedule
PE-1	Develop a stormwater pollution prevention education and outreach program plan whose purpose is to inform a target audience of the impacts of stormwater pollution on water bodies and provide methods by which they can help reduce/eliminate stormwater pollution. The plan would also involve the development of educational materials (PE-2) and training (PE-3) to be provided to targeted audience groups. Target audience groups could include Site Operations Maintenance, Site Operations Project Managers, Site Operations Site Services, Procurement, Security, and Facility Managers.	Completion of a quality program document that is compliant with requirements, identifies target audiences, type and content of educational materials to be developed, training content and schedule for program implementation	Environment, Safety, Health and Quality (ESH&Q) Environment Program Manager	June 2025
PE-2	Develop and distribute educational materials (e.g. fact sheets, brochures, posters, etc.) to target audiences identified in the stormwater pollution prevention education and outreach program plan	Completion of educational materials Number of materials disseminated and/or events at which materials will be presented	ESH&Q Environment Program Manager	June 2026 June 2026
PE-3	Develop and conduct stormwater pollution prevention training to target audiences as identified in the stormwater pollution prevention education and outreach program plan	Completion of training materials Number of trainings given and/or training completion rate	ESH&Q Environment Program Manager	June 2026 June 2026

Public Involvement/Participation

	Best Management Practices	Measurable Goals	Responsible Role	Schedule
PI-1	<p>Establish an integrated MS4 Permit Team that would review the draft Stormwater Management Plan (SWMP), annually review SWMP program implementation progress and/or effectiveness and develop program goals. The MS4 Permit Team would consist of participants from multiple departments within NREL that could include: ESH&Q; Site Operations Maintenance; Site Operations Project Management; Engineering and Construction; and Procurement, and a representative from DOE.</p>	<p>Establishment of the integrated MS4 Permit Team</p> <p>Completion of a guidance document outlining the functions and responsibilities of the MS4 Permit Team</p>	<p>ESH&Q Environment Program Manager</p>	<p>December 2024</p> <p>December 2024</p>

Illicit Discharge Detection and Elimination

	Best Management Practices	Measurable Goals	Responsible Role	Schedule
ID-1	Stencil curbs above storm drain inlets with warnings to prohibit illicit discharges at that location	Completion of storm drain inlet stenciling	Site Operations Maintenance Program Manager	December 2024
ID-2	Develop a dry weather screening plan to identify illicit non-stormwater discharges	Completion of a dry weather screening plan	ESH&Q Environment Program Manager	June 2024
ID-3	Implement the dry weather screening plan to identify illicit non-stormwater discharges. Correct illicit discharges that can be readily resolved, prioritize illicit discharges that would require future funding, and develop a schedule to address them.	Number of illicit discharges identified Number of illicit discharges readily resolved	ESH&Q Environment Program Manager	December 2024 December 2024
ID-4	Revise existing training and/or develop new training for NREL staff to include awareness of impacts of illicit discharges on water bodies, measures that may be taken to minimize impacts, and identification of NREL's prohibited discharges requirements. Targeted staff could include: Site Ops Maintenance; Site Ops Facilities; Security; Facility Managers; and ESH&Q staff.	Completion of revised and/or new training	ESH&Q Environment Program Manager	December 2025
ID-5	Revise existing educational/informational materials and/or develop new educational/informational materials for subcontractors to include awareness of impacts of illicit discharges on water bodies, measures that may be taken to minimize impacts, and NREL's prohibited discharges requirements. Targeted subcontractors could include construction, pesticide applicators, roadway deicing applicators, and maintenance/repair.	Completion of revised and/or educational/informational materials Educational/informational materials distributed to targeted subcontractors	ESH&Q Environment Program Manager	December 2025 June 2026

	Best Management Practices	Measurable Goals	Responsible Role	Schedule
ID-6	Incorporate requirements for proper waste management into scopes of work for applicable contracts	Requirements incorporated into the scopes of work for applicable contracts to address waste management requirements Completion of annual review of a sampling of applicable subcontracts to verify that proper waste management requirements were included.	Site Operations PM/EC Manager	December 2025 Annually throughout the permit term beginning in December 2026

Construction Site Runoff Control

	Best Management Practices	Measurable Goals	Responsible Role	Schedule
CS-1	Maintain official record of NREL construction standard drawing notes and construction specifications related to construction site runoff control	Completion of annual review to determine if the drawing notes and construction specifications are up to date	Site Operations PMEC Manager	Annually in December of each year throughout the permit term beginning in 2024
CS-2	Review design and construction documents to ensure stormwater requirements and best practices are addressed as identified in NREL's construction design and construction specification documents	Review a sampling of design and construction documents to determine if design and construction specifications were incorporated as required	ESH&Q Environment Program Manager	Annually in December of each year throughout the permit term beginning in 2024
CS-3	Revise requirements for small projects (defined as a project that disturbs an area of less than one acre and that does not require EPA Construction General Permit coverage) to include erosion and sediment control measures	Complete revisions of stormwater-related requirements for projects not requiring EPA Construction General Permit coverage Field verification of selected projects to determine if appropriate and effective erosion and sediment control measures were used	Site Operations PMEC Manager	December 2025 Periodically throughout each year of the permit term beginning in 2026
CS-4	Develop contractual enforcement procedures and consequences to address subcontractor noncompliance with NREL's specifications related to stormwater permitting, erosion and sediment control, waste management, and illicit discharges	Enforcement procedures and consequences are incorporated into contract documents Completion of an annual analysis of the type and number of enforcement actions imposed	Procurement	December 2025 Annually throughout the permit term beginning in December 2026

Post Construction Runoff Control

	Best Management Practices	Measurable Goals	Responsible Role	Schedule
PC-1	Develop an infrastructure master plan that identifies the types and locations of stormwater infrastructure and post construction stormwater runoff controls to be incorporated in existing and future development designs.	Completion of a quality infrastructure master plan that defines stormwater infrastructure and post construction stormwater runoff controls	Site Operations PMEC Manager	December 2025
PC-2	Develop a landscape master plan that identifies vegetation and hardscape measures to stabilize soils and protect hillsides from erosion and sedimentation to be incorporated into future development designs.	Completion of a quality landscape master plan to minimize erosion and sedimentation	Site Operations PMEC Manager	December 2025
PC-3	Revise existing NREL construction design guidelines to incorporate the stormwater management requirements identified in the infrastructure master plan and landscape master plan	Completion of NREL design guideline revisions to include new stormwater management requirements Review a sampling of design and construction documents to determine if new stormwater management requirements were incorporated	Site Operations PMEC Manager	December 2025 Annually throughout the permit term beginning in December 2026
PC-4	Develop a stormwater infrastructure system maintenance document to be incorporated into the NREL SWMP that includes maintenance procedures and schedules for the structural components of the stormwater conveyance system (e.g. detention basins, culverts, gutters, and other applicable components)	Completion of a quality maintenance document that defines maintenance procedures and schedules for the stormwater infrastructure system.	Site Operations PMEC Manager	December 2024

Pollution Prevention/Runoff Control

	Best Management Practices	Measurable Goals	Responsible Role	Schedule
PP-1	Develop a guidance document for managing potable water discharges (e.g. fire hydrant and building fire line flushing/drainage, building washdowns, etc.) to be distributed to appropriate subcontractors and NREL staff.	Completion of a quality guidance document that addresses potable water discharges Distribution of guidance document to appropriate subcontractors and NREL staff	ESH&Q Environment Program Manager	December 2024 December 2024
PP-2	Design and construct a roadway deicing material containment structure appropriate for the materials used on-site	Completion of a roadway deicing material containment structure design Completion of construction of a roadway deicing material containment structure	Site Operations PMEC Manager	December 2028 December 2028
PP-3	Develop comprehensive site pollution prevention maintenance plan to be incorporated into the NREL SWMP that identifies activities and schedule needed to manage potential stormwater pollutants in roadways, parking lots, sidewalks, maintenance and storage areas, and roadway deicing material containment areas. The plan would also incorporate oil/water separator inspections and cleaning, and an annual review of alternative deicing materials.	Completion of a quality site pollution prevention maintenance plan that defines maintenance procedures and schedules for impervious surfaces and other structures	Site Operations PMEC Manager	December 2025
PP-4	Implement comprehensive site pollution prevention maintenance plan	Completion of maintenance activities per schedule identified in the plan	Site Operations PMEC Manager	Annually throughout permit term beginning in 2026

	Best Management Practices	Measurable Goals	Responsible Role	Schedule
PP-5	Incorporate requirements describing prohibited discharges to the stormwater infrastructure system into applicable vendor/other subcontractor contracts or scopes of work	Identify vendor/other subcontractor contracts or scopes of work to be modified Requirements incorporated into applicable vendor/other subcontracts or scopes of work	Procurement	December 2026 December 2026